DOCUMENT RESUME

ED 216 650 HE 015 118


AUTHOR Brown, Peggy, Ed.
TITLE Liberal Learning and Professional Programs.
INSTITUTION Association of American Colleges, Washington, D.C.
PUB DATE May 82
NOTE 19p.
AVAILABLE FROM Association of American Colleges, 1818 R Street, N.W., Washington, DC 20009.
JOURNAL CIT Forum for Liberal Education; v4 n6 May-June 1982

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Business Administration Education; College Programs; Cultural Context; *Engineering Education; Ethics; Health Services; Higher Education; Humanities; *Interdisciplinary Approach; *Liberal Arts; Medical Services; Medical Students; Pharmaceutical Education; *Professional Education; Technological Advancement; Undergraduate Students
IDENTIFIERS Colorado School of Mines; George Washington University DC; Massachusetts Coll of Pharmacy Allied Health Sci; Mining; University of Florida; University of Kansas; Worcester Polytechnic Institute MA



ABSTRACT

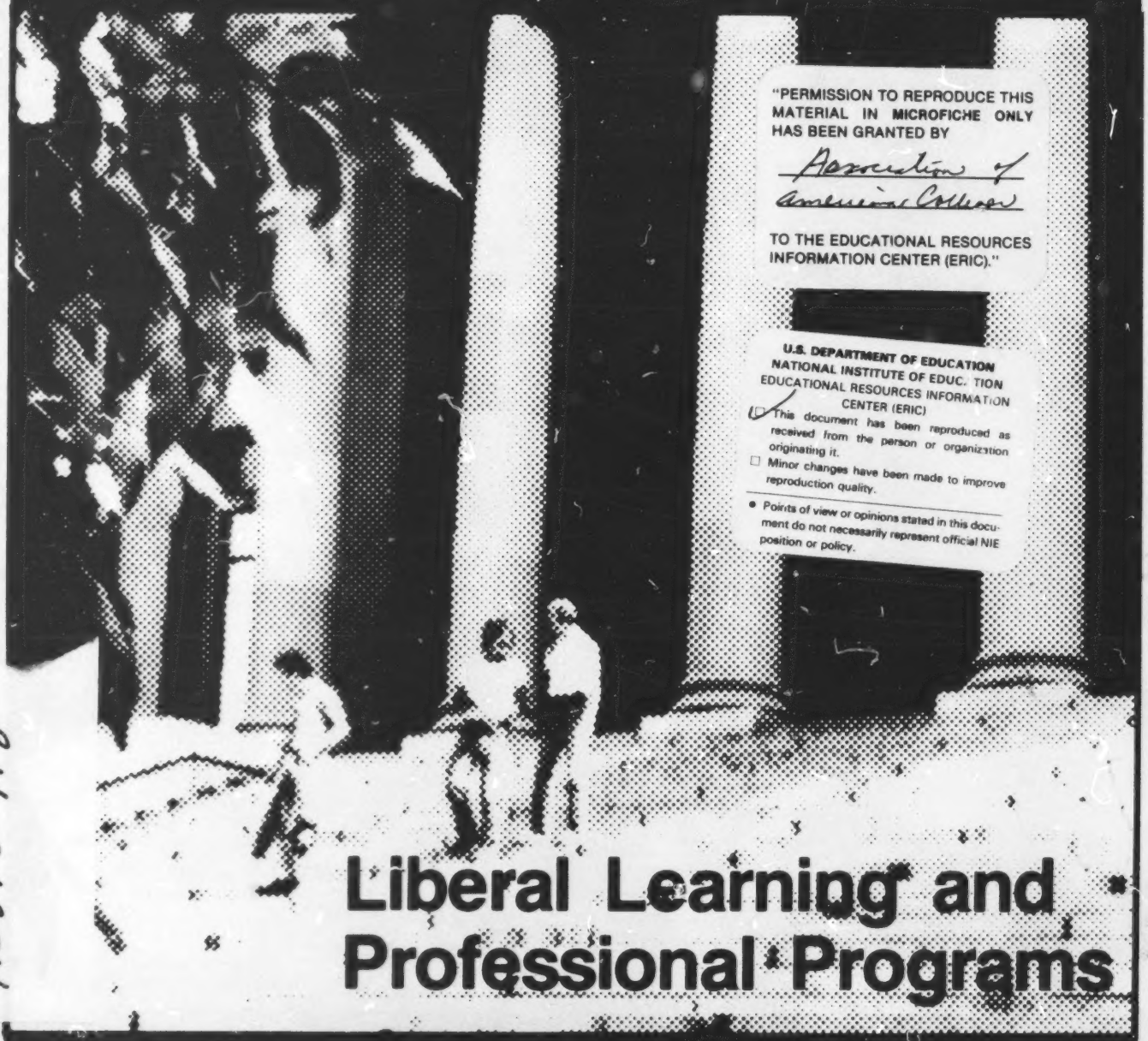
Challenges faced by administrators and faculty members working to integrate liberal education into the professional curricula are considered in two essays, and exemplary programs at colleges and universities are described. In "Liberal Learning and the Business Students: What Are We Doing? What Should We Be Doing?" David A. Fedo presents the case for liberal education in the business school and urges administrators to integrate liberal arts into all facets of the professional curriculum. In "Liberal Learning and Engineering Education," David P. Billington and Robert Mark consider reasons for emphasizing liberal learning for technical students, the concept that interdisciplinary teaching can be improved, and the need to relate technical ideas to broad cultural realities. The following college programs are described: Business and the Humanities, the University of Kansas; Humanistic Approach to Pharmacy Education, Massachusetts College of Pharmacy and Allied Health Sciences; Sparking Student Interest in Humanities, Colorado School of Mines; Humanities Perspectives on the Professions, University of Florida; Ethics and Health Care Issues, George Washington University; and Qualifications in Liberal Learning, Worcester Polytechnic Institute. Additional programs that are briefly described include: Folklore and Language, Adelphi University, and Criminal Justice and the Humanities, University of North Carolina at Charlotte. Relevant publications are also briefly described. (SW)



**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ED216650

# The forum for Liberal Education



"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Association of American Colleges

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUC. TION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

## Liberal Learning and Professional Programs

aac Association of American Colleges

May/June 1982
Volume IV, Number 6

forum

May/June 1982
Volume IV, Number 6

**Liberal Learning and the Business Students: What Are We Doing? What *Should* We Be Doing?**
*by David A. Fedo* ..... 2

**Liberal Learning and Engineering Education**
*by David P. Billington and Robert Mark* ..... 4

**The University of Kansas**
*Business and the Humanities* ..... 5

**Massachusetts College of Pharmacy and Allied Health Sciences**
*Humanistic Approach to Pharmacy Education* ..... 7

**Colorado School of Mines**
*Sparking Student Interest in Humanities* ..... 8

**University of Florida**
*Humanities Perspectives on the Professions* ..... 9

**George Washington University**
*Ethics and Health Care Issues* ..... 11

**Worcester Polytechnic Institute**
*Qualifications in Liberal Learning* ..... 13

**Additional Programs** ..... 15

**Resources** ..... 17

**Editor**
Peggy Brown
**Research Assistant**
Kim Merrill

©1982 by the Association of American Colleges.

Cover photo courtesy of the Massachusetts College of Pharmacy and Allied Health Sciences. Jeremy Cole, photographer.

# Liberal Learning and Professional Programs

The activities described in this issue illustrate some of the challenges faced by administrators and faculty members striving to integrate liberal education into the professional curricula. Program directors discover indifference to their efforts from both students and instructors, little room for electives in the already crowded professional curriculum, and few textbooks or resources which examine topics from the perspectives of both the liberal arts and the professions. In addition to these challenges, there are also rewards: increased interaction between faculty members in the liberal arts departments and the professional programs, an awakening of student interest in the humanities, and a new awareness of a profession's relationship to society.

In the following essay David Fedo presents the case for liberal education in the business school and urges administrators to integrate liberal arts into all facets of the professional curriculum. His arguments apply to all programs which are training students in the techniques of their professions and educating future professionals in the skills of leadership, critical thinking, and creative problem-solving. Similarly, while David Billington and Robert Mark discuss the value of liberal arts for engineers, their approach can also be employed by administrators seeking to involve their professional students in the liberal arts and sciences.

## Liberal Learning and the Business Students: What Are We Doing? What *Should* We Be Doing?

*by David A. Fedo*
*Associate Undergraduate Dean*
*Bentley College*

In a recent issue of *The New Yorker* there is a wonderfully droll cartoon which shows an obvious chairman of the board announcing to his executive underlings, at the conference table, an astonishingly eccentric agenda. "Today, for a change," he deadpans, "I thought we could discuss existence in general." In a business environment dominated by talk of profit margins, marketing strategies and relentless foreign competition, imagine the resulting consternation! It is a joke, of course; this kind of thing simply does not happen. Or--does it?

America's image of the organization man (and now woman) – a blind slave to technology, shallow, insensitive to culture and context and ill-prepared to grapple with the more profound questions of life and death – is persistent and hard to put aside. Yet there is probably less substance to that image today than there has been for two decades. And if there has been a change from the late 1960s into the 1980s, that change is due in part to the serious attempts by professional institutions of all kinds to respond to the need to graduate men and women who are *more* than voca-

tional zombies, who can think clearly and even read widely. Of course, much remains to be done, but there has been progress.

Many of the nation's business schools and colleges have been among those who have taken the lead. Some had anticipated the conclusions of the Rockefeller Foundation's Commission on the Humanities in 1980, which darkly warned against the "severe effects" of narrow preprofessionalism on undergraduates. In fact, the Accreditation Council of the American Assembly of Collegiate Schools of Business (AACSB) has for some years required at least 40 percent of the curriculum for business majors to be allocated to non-business subjects. Numbers do not tell the whole story, of course, but they do suggest an attitude of growing awareness and acceptance.

Moreover, this acceptance is being articulated more and more by top managers in the corporate world itself. "Today we require leadership that is of sufficient breadth and depth to reconcile its own corporate interests with the public interest," writes Roger B. Smith, chairman of the General Motors Corporation, in a recent essay prepared for the Council for Financial Aid to Education. The keynote address at a 1981 national conference on "Business and the Humanities" at the University of Kansas, a speech delivered by the chairman of the board of Sterling Drug, Inc., was titled "Humanities are Essential for a Business Education." And Robert E. Beck of the American Telephone and Telegraph Company endorsed the continuing usefulness and applicability of liberal education to business in the widely-circulated 1981 AAC publication, *The Liberal Arts Major in Bell System Management*.

But if actual resistance to liberal learning has waned, real understanding of its mission in the business schools has not always followed. Exactly *how* and *why* the traditional liberal arts are "useful"—even "essential"—for the would-be accountant and marketing executive remain questions worthy of attention.

In 1959 Earl J. McGrath (in his monograph *Liberal Education in the Professions*) provided three possible answers: liberal education (1) provides "essential knowledge," (2) cultivates "intellectual skills," and (3) develops "traits of personality and character." All well and good; McGrath is keeping respectable company here with such earlier theorists as Plato, Cardinal Newman, Alfred North Whitehead and Ortega y Gassett. But how to measure these outcomes in the "practical" world of business, where the competencies and skills most desired are (apparently) specific and almost always resolutely unambiguous?

Thankfully, hard data on this question is becoming available, most recently in an important book called *A New Case for the Liberal Arts*, by David G. Winter, David C. McClelland, and Abigail J. Stewart (Jossey-Bass, 1981). Painstaking research by the authors over some years—measurement techniques included evaluating how students actually processed and used information, not merely how much they knew—convincingly shows the immediate and continuing benefits of liberal education in the careers and lives of students. In four areas, especially, the authors found that liberal education played a crucial determining role: in providing students the resources for adapting to change; in nurturing critical thinking and the growth of conceptual skills; in encouraging intellectual independence; and in developing leadership capacities.

These attributes are vital to business students. If an accountant's first job depends largely on his or her demonstration of strong technical skills, career advancement occurs primarily when those "other" values are brought into play. The accountant or systems analyst needs the larger perspective, the overall interpersonal skills, the ability to weigh the ethical and social consequences of decisions, and the breadth to understand the difference between knowledge and wisdom.

*Integration*, ultimately, is the key. Liberal education can only have impact in the business schools when it is successfully incorporated into the *total* curriculum, not shunted off to the first two years of the baccalaureate program. This is, admittedly, the one area where business schools have failed most.

I have two recommendations:

One, the curricula of undergraduate business institutions of higher learning must be sufficiently flexible to accommodate liberal arts courses—including electives—in the junior and senior years. Such integration is crucial. The notion that these years should be reserved for the professional courses, which better prepare business students for the world of work which they are about to enter, is patently absurd. In fact, this world of work demands broad skills as well as technical competencies; to separate them out is to deny their natural partnership. Further, to give students only lower-level survey courses (in literature and history, for example) without allowing for some advanced exposure to at least several of the disciplines of the humanities, social sciences, and natural sciences is to rob students of an awareness of the richness of those disciplines.

Second, integration strongly suggests providing perspectives and showing relationships. Despite the cost and other difficulties, interdisciplinary courses provide the best setting to examine the connections (and tensions) between business and science, between the values of the corporation and the society at large, between profits and politics. A student in personnel management who reads as case studies works by Dreiser, Arthur Miller and Studs Terkel, and who learns that productivity at whatever the cost eventually brings in diminishing returns, will be more successful. What this requires is that humanities and business faculty must step outside of their departments, come together and examine where joint courses are possible, and get to work.

Business ethics is one area where, on the undergraduate level, interdisciplinary courses have already been mounted. Taking the initiative, philosophy and management faculty (augmented by others) have created on many campuses courses which, though it is too early to say for certain, might well have significant impact on American business. Society can only be the beneficiary of such efforts.

One final note: With the rapid expansion of graduate programs in business in the last decade—the extraordinary growth of the MBA as the new "hot" degree was worthy of a *Time* magazine cover story last spring—it is now appropriate for college and university administrators to examine what role liberal education can play

at the post-baccalaureate level. A cue might come from the nation's medical schools, where historians and philosophers and writers are already in place; the lively Humanities Department at the Hershey Medical Center at Pennsylvania State University is a good model. Clearly, a degree of specialization at the graduate level will remain necessary. But specialization at the exclusion of those broader values so important to the education of professionals, at whatever stage of their schooling, is at the very least unfortunate, at the very most dangerous. We should, I think, do better.

---

Dr. Fedo is also Professor of English at Bentley College.

---

## Liberal Learning and Engineering Education

*by*
*David P. Billington*
*Professor of Civil Engineering*
*and*
*Robert Mark*
*Professor of Civil Engineering and Architecture*
*Princeton University*

The educational integration of engineering and the humanities can be done; it can stimulate better engineering, and it can enrich humanistic scholarship. For twenty years we have worked to illustrate this integration and to make available to other institutions some teaching ideas and materials to help widen and deepen higher education.

The education of engineering students typically rests upon a crowded, four-year curriculum, leaving little time for non-scientific subjects. For those students who go on to graduate school, engineering programs usually offer nothing outside of technical courses and research. Even for professional preparation, this policy seems short-sighted.

Today's engineering graduates rarely enter industry in the kind of apprenticeship that most graduates entered as recently as ten years ago. More frequently, they adopt one of two types of technical leadership roles:

(1) **In design,** for which there is a tradition of great works. Like the young writer, the student engineer needs both the discipline and the inspiration of precedent, and that requires knowledge of the recent history of technology. That history is, however, part of the general history of our culture (hence the title of the leading historical journal in the history of technology: *Technology and Culture*). Therefore, the student needs to see engineering work in the context of culture in order not only to be more cultured, but also to perform as a better technologist.

(2) **In management,** where the young engineers are soon faced with making decisions which bear on a far wider sphere then the purely technical, often including political, economic, and social aspects of technology. One powerful way to understand such aspects is through studies of the recent past in which technology is critically reviewed by engineering teachers. Criticism is both positive and negative, and *critical* judgment is essential for technical managers who, having this facility along with technical skills, are far more likely to rise in the ranks of industry and government than those trained purely in technology.

Still another reason for stressing liberal learning for technical students is that with the altering of national priorities, a larger group of bright, more diversified applicants is now being attracted to engineering. It is just these new engineering students, likely to be destined for roles in policy-making, who become most frustrated by narrow technological programs.

The primary difficulty in teaching humanities to engineering students is the basic density of engineering instruction. Not much time is left for working on assignments in liberal arts courses after the students have completed their technical program assignments. Another general problem for technical students is that they are usually not well enough informed about the liberal arts to select humanities courses intelligently. With only a few electives available, this is a far more serious problem for engineering students than for liberal arts students who have the opportunity to sample many disciplines. Some technical faculty make the problem even more difficult by projecting an attitude critical of the humanities offerings, citing their "softness" compared to technical subjects.

One solution to this dilemma, which we have been exploring for nearly two decades at Princeton, is to broaden the definition of engineering to include not just the scientific criteria for design, but also the criteria of ethics and aesthetics. Our goal is to develop materials for the teaching of modern engineering as an integral part of the humanities. These materials, directed to students both in engineering and in humanities, represent a new departure in university education for two reasons. First, the materials draw perspectives from the three fundamental disciplines within the university (numerical, verbal, and visual), and second, they seek to interpret contemporary ideas of engineering and society in terms of engineering history.

Our work is based upon the concept that interdisciplinary teaching, essential for modern higher education, can be greatly improved if it seeks to unify the basic disciplines. Engineering of large-scale public works serves as one central means for that unification because their design demands all three disciplines. Our materials attempt to demonstrate this by providing scientific formulation grounded in numerical studies and often with actual, though simplified, calculations; historical perspective through written interpretation of the social context for large-scale public works; and visual examples by means of illustrations, exhibitions, and slide sets.

Equally important is the need to give shape to technical ideas that connect them to broad cultural realities of the present-day world. For example, the main objects produced by technology can be divided into two types: structures and machines. The former represents the static, permanent, and more public works which symbolize tra-

dition and stability; whereas the latter stands metaphorically and literally for the dynamic, transient, and more private works which symbolize change and energy. The bridge in motion is in trouble while the stalled car symbolizes a break down in the functioning of modern society.

A second illustration of cultural ideas coming from technology is the wide extent to which the past 200-year tradition in bridges, towers, and vaults has led to a new art form, parallel to and independent of architecture and sculpture. Works of great structural artists such as John Roebling, Gustave Eiffel, and Robert Maillart rival in their beauty and their efficient use of public resources the glories of some Roman monuments to engineering as well as the great Gothic structures of France. Indeed, still another facet of our studies is concerned with reinterpreting the technical basis of these historic buildings and with connecting them to the modern tradition in engineering design.

What these objectives call forth, in our view, is a new type of educational document. One which presents engineering works in terms of authentic but simplified quantitative analysis fully accessible to liberal arts students; details the history of social forces that led finally to the completed project; and includes substantial visual materials to demonstrate the personality of the designers, as well as the beauty of their works. With funding from the National Endowment for the Humanities, the Alfred P. Sloan Foundation, and the Andrew W. Mellon Foundation, we have prepared such documents and have them available for distribution. They consist of simplified calculations explaining form, scholarly texts with bibliographies detailing historical origins and results, and numerous slides integrated with the calculations and the historical texts. Such documents, we believe, can make both the history and the engineering accessible to engineering and liberal arts students and to the general public, and can demonstrate the intrinsic connection between the culture and the large-scale engineering projects that characterize its life.

## The University of Kansas

# *Business and the Humanities*

Writing in the Point of View column in the September 26, 1977, issue of *The Chronicle of Higher Education*, Joseph Pichler, then dean of the University of Kansas (KU) School of Business, stated, "I am disturbed that many academic communities have so easily accepted the position that there is a basic conflict between professional and liberal education. . . . The business schools should recognize that the liberal arts have a comparative advantage in teaching certain analytic skills, qualities of mind, and personal orientations that are preconditions for the study of management. The goal should be to apply these subjects to business topics, rather than to duplicate them in a separate curriculum." The essay, according to John Tollefson, current dean of the business school, attracted the attention of a National Endowment for the Humanities (NEH) program officer who encouraged the school to develop a project which would accomplish what Pichler had described. The result was a three-year NEH-funded program titled Business and the Humanities: A Closer Relationship, which ran from July 1979 through June 1981.

The Committee on Business and Humanities, which prepared the proposal and oversaw the grant activities, designed several projects. These included the development of courses, a communications clinic for business majors, a faculty exchange program between the School of Business and humanities departments, and a symposium on business and humanities. The committee, which included the deans of the School of Business and the College of Liberal Arts and Sciences and representatives from both units, was aided by such previous collaborative efforts as a business ethics conference and business instructors' participation in philosophy colloquia, according to Tollefson.

### Course Development

The committee invited humanities faculty members to submit proposals for upper level humanities courses which would interest business students. To assist in course development, chosen instructors received two- to six-week summer stipends to familiarize themselves with the relationships between business and their disciplines and to prepare the courses. Says Tollefson: "We wanted new courses which addressed the connections between business and humanities and which could be considered truly humanities courses." According to Tollefson, the committee chose instructors who were respected by their colleagues for both their teaching and scholarly pursuits.

Moral Issues in Business, offered by the philosophy department, was one of the first courses developed and has proven to be one of the most popular, according to Tollefson. "This course presents ethics as a formal system," he says, "and demonstrates how to deal with ethical questions systematically and logically. It provides guidance on issues that students recognize as important." Topics include advertising, conflict of interest, and codes of conduct. Student evaluations regularly recommend that the business school make this a required course. Other new philosophy courses include Ethics and the Professions and Justice and Economic Systems, which examines the theories of Locke, Adam Smith, and Marx.

The history department designed Topics in United States Business History, which focuses on American business in the post-Civil War era from both entrepreneurial and institutional perspectives. The English course, Literature and Management, examines a mixture of writings in management, economics, and literature, such as Adam Smith's *Wealth of Nations*, Twain and Warner's *The Gilded Age*, and Dos Passos' *The 42 Parallel*. Students read about the harvest labor market in an economics journal and *The Grapes of Wrath*. Tollefson, who has team-taught the course, notes that a course such as this does present some difficulties in providing a focus for students.

Two language departments designed courses on business practices in Mexico and East Asia. For example, in Cultural Interactions: Business and Humanities in the

Hispanic World, students learn about the differences in doing business in the United States and the Hispanic countries through the study of literature and culture. One of these differences, says Tollefson, is the interest and involvement of Hispanic business and professional managers in arts and literature.

Faculty members also designed two honors seminars, one in business for non-business students and one in humanities for business majors. On Being Human, the course for business students, involves students with business and management issues growing out of literature. For example, students read Conrad's *The Heart of Darkness* and view the film *Apocalypse Now*. Other readings include *The Tempest*, *In Cold Blood*, and *Oedipus Rex*. The undergraduates also analyze and discuss current events and such television programs as *Sixty Minutes*. Says Tollefson: "The course's emphasis is to reintroduce students to the world of literature and relate this to what is currently going on in the world and to their future professional roles."

In Understanding American Business, the seminar for nonbusiness students, the focus is on such topics as organizational behavior and theory, images of the American businessman, and the social responsibilities of business. "The humanities students enjoy this course," says Tollefson. "It was not designed to recruit students into the business school but rather to explore issues and provide opportunities for dialogue and debate."

Students take these courses to fulfill humanities requirements and as electives, according to Tollefson. Business majors also use these courses for concentrations in nonbusiness disciplines. For concentrations, students take a series of courses, established by the appropriate department, in such areas as East Asian languages and cultures, history, French, and biochemistry. Twenty percent of the business students pursue concentrations, which are designated on their degrees; five percent of the concentrations are in the humanities.

Tollefson is pleased that the courses attract an equal number of students from the business school and the liberal arts college. All students also benefit from the Communications Resource Center designed for business majors under the NEH grant. The speech and writing clinic, which is operated by the English department, proved successful enough to receive university funding and be opened to all students.

### Faculty Participation

The faculty interaction generated by the grant is one of the program's greatest benefits, says Tollefson. Instructors established contacts with colleagues from different fields and began thinking about courses and research which they could jointly pursue. Nature and Land Values is one course which resulted from this contact but which was not developed under the grant. Team-taught by an English department faculty member and a business school instructor, the course looks at natural resources from the perspectives of business, economics, and literature.

Although no business faculty members expressed disapproval or opposition to the humanities/business collaborations, Tollefson did discover some indifference to the program. He says about 12 of the school's 60 instructors are very enthusiastic about the new relationships between business and the humanities and remain committed to continuing the efforts. KU's recent Conference on United States-East European Economics and Business Relations is an example of these ongoing activities. While the conference focused on trade relations and economic concerns, Tollefson notes that discussions of cultural comparisons kept emerging. Humanities instructors, he says, also are enthusiastic about the contacts made with business school faculty members. He admits that some humanities instructors were skeptical about the program's goals. "Their discussions about what was a true humanities course helped keep us on track," says Tollefson. "We did not want to provide career-related objectives, but rather general education objectives."

The NEH grant also provided funds for faculty members from the business school and the liberal arts college to spend time in residence at the other academic unit. Two faculty members, representing the departments of history and philosophy, served as "humanists in residence" at the business school. They visited classes, presented public lectures, and met with interested faculty members to discuss business topics and the humanities. A business professor worked with the history department on similar projects and, according to the grant evaluators, "won the intellectual admiration of all history department members with whom we spoke." The success of the business-humanities exchange has generated interest in expanding the concept to the entire university, according to Tollefson.

With grant funds, the business school and the Center for Humanistic Studies cosponsored a national conference on business and humanities. The conference provided opportunities for business and humanities academicians, students, and business representatives to learn about the NEH grant and listen to presentations on humanities and business education and the experiences of liberal arts graduates in executive positions.

In the year after the grant's expiration, Tollefson is gratified with the continued contact between business and humanities faculty members. The grant, he says, has also stimulated discussion on general education in the Master of Business Administration program, including the possibility of incorporating a Great Books approach. His own interest in integrating international concerns into the business curriculum has been aided by the project contacts. Tollefson notes that while some of the courses developed during the project may not continue, those with strong faculty commitment will survive. "Closer faculty relationships may be more important, though, than the fate of individual courses," he says.

"The goal of the Business and the Humanities Program . . . is to establish stronger ties between those two academic disciplines," according to a program brochure. "Such ties will serve students by providing them with a broader frame of knowledge, businesses by providing them with well educated managers and executives capable of solving the most difficult problems, and society at large by bringing into the business world individuals who have an appreciation of cultural and aesthetic values in addition to sound professional education." In undertaking such a program, Tollefson says, "Don't look to the impact of a student's vocational preparation as justification for work in the humanities. A program such as

this is not worth trying if you don't believe in liberal education." *P.B.*

For more information, contact:
John O. Tollefson, Dean
School of Business
The University of Kansas
202 Summerfield Hall
Lawrence, KS 66045
913/864-3795

## Massachusetts College of Pharmacy and Allied Health Sciences

# *Humanistic Approach to Pharmacy Education*

In March 1982, the Massachusetts College of Pharmacy and Allied Health Sciences (MCP/AHS) became the first of the 72 pharmacy colleges in the United States to require a specific, multidisciplinary humanities course of its upper-level undergraduates. Developed with the help of a pilot grant from the National Endowment for the Humanities (NEH), the five-credit, team-taught course, Interpersonal Communication in the Health Professions: A Humanistic Approach, aims to improve pharmacy students' communication skills by asking them to consider humanistic, ethical, and socio-cultural aspects of communication.

All students enrolled in the course attend a weekly two-hour general lecture, film, or presentation on health care or communication. Groups of approximately 25 students then meet twice a week to discuss topics raised by the general meeting and to apply theoretical concepts to particular professional situations. In the bi-weekly sessions, students discuss topics such as the social and cultural implications of linguistic choices, the role of pharmacists in professional settings and in society, nonverbal communication, personal values, terminal illness, and the implications of an aging population on the health care professions. Discussions also focus on required reading such as D.H. Lawrence's *Sons and Lovers*, C.P. Gilman's *The Yellow Wallpaper*, and Henrick Ibsen's *An Enemy of the People*.

Faculty members in the college's Division of Liberal Arts taught this course as an elective for three years. During that time they modified the course and asked for students' opinions on whether the course should be required. The course was designed in response to a national study called the Millis Commission. Sponsored in 1975 by the American Association of Colleges of Pharmacy, the Millis Commission suggested that pharmacy students need more exposure to humanities, social sciences, and behavioral sciences; more "knowledge of themselves and the world;" and better skills to communicate that knowledge. Interpersonal Communication in the Health Professions attempts to combine several of the study's suggestions by using literature from the humanities and social sciences to teach communication skills.

### Expanding the Role of Humanities

Requiring Interpersonal Communication in the Health Professions of undergraduates is only one indication of the liberal arts division's interest in "expanding the role of humanities at the college through infusing materials and values directly into the professional training of the college's students," explains Amy Lezberg, associate professor of English and humanities and assistant dean for faculty affairs. She notes that the American Council on Pharmaceutical Education's mandate that the liberal arts comprise 20 percent of the curriculum of five-year undergraduate pharmacy programs encouraged faculty in the liberal arts division to design liberal arts courses that address the particular concerns and needs of pharmacy students. Although the college had always required students to take Freshman English and Introduction to Social Sciences, the distribution requirements of its liberal arts division could be met with electives. Students usually met these distribution requirements in their first two years of college. Consequently, few students took upper-level liberal arts courses or studied humanities after completing many of their professional courses offered by the division of scientific studies, applied sciences, or administrative and management sciences.

Thus, the liberal arts division began offering courses which require upper-level degrees of competency in particular fields and which deal with some aspect of pharmacy or health care. For example, Political Communication and Health Care Policy studies the relationship between the process of political communication and the implementation of health care policy. Students in this course read and discuss the health care news in *The New York Times*, Susan Sontag's *Illness as Metaphor*, and several books about the politics of newsmaking and health care in the United States. The course presents four approaches to health care and addresses topics such as the relationship between government and the press, the history of health care reform in the United States, and proposals for health care delivery reform. Examples of other courses that have prerequisites include Medical Anthropology, which studies the influence of culture on health, disease, and the treatment of disease; and Bioethics, which introduces students to ethical issues in biology, medicine, and pharmacy.

In addition to courses that incorporate aspects of pharmacy, the liberal arts division offers "pure" courses in humanities, social sciences, and behavioral sciences, says Lezberg. She comments that faculty members, however, sometimes feel the influence of the college's professional focus. "This can be a positive influence," Lezberg says. "Some of the liberal arts faculty members have discovered that the area of health care offers new, unexplored tangents to their own disciplines. For example, one professor is examining the image of the health professions in mass media, while another discusses women and sickness in a woman's literature course." Lezberg credits some of the positive attitudes in the liberal arts division to visits made by a NEH consultant before the college's receipt of the pilot grant. The consultant came to help

design Interpersonal Communication in the Health Professions, but also contributed to faculty members' ideas about the role of liberal arts in a professional school, says Lezberg.

**Consultant's Visits**

During his five visits, the consultant went on clinical rounds, attended an elective class of Interpersonal Communication in the Health Professions, received positive responses from students about requiring the course, and conducted a faculty workshop called Liberal Arts in the Professional Environment. At the workshop and in meetings with individual faculty members, he asked, "How are your educational goals affected by being a liberal arts division in a college of pharmacy, and how do those goals differ from your original expectations?" He also suggested ways to adapt the concepts and methodologies of liberal arts disciplines to the professional interests of pharmacy students, notes Lezberg. She believes the consultant's visits fostered better cooperation between the liberal arts division and the professional divisions because "the consultant had science and medical training and could understand both viewpoints."

Faculty members also benefited from NEH summer seminars. These were extremely valuable, says Lezberg, and led to new ideas for projects and courses. One professor attended a seminar on political communication at the University of Wisconsin which was useful for the Political Communication and Health Care Policy course, while another attended a seminar on the legal and ethical aspects of the interdependencies of health care professionals. A seminar on historical writing at the University of California-Berkeley prompted the development of a history of medicine course. In addition, a Hastings Institute summer meeting on bioethics contributed ideas for the bioethics course.

These efforts to expand the scope and number of the college's liberal arts courses reflect a recent trend in the practice of pharmacy, says Lezberg. Pharmacists no longer simply dispense medical products; they now are more involved with patients, drug counseling, the monitoring of drug therapy, and other aspects of health care. The larger role of the pharmacist in society requires a change in pharmacists' traditional professional training, explains Lezberg. That is why MCP/AHS will continue to develop the liberal arts division and encourage faculty in the professional divisions to use guest lecturers from the liberal arts faculty in their courses. "We have decided to require another humanities course, Pharmacy Ethics, of our fifth-year students," says Lezberg. She hopes that the prospective presentation on Interpersonal Communication in the Health Professions to the American Association of Colleges of Pharmacy and articles on the course in the *American Journal of Pharmaceutical Education* will persuade other colleges of pharmacy to expand the role of liberal arts in their curricula. *K.M.*

For more information, contact:
Amy Lezberg, Associate Professor of English and Humanities
Assistant Dean for Faculty Affairs
Massachusetts College of Pharmacy and Allied Health Sciences
179 Longwood Ave.
Boston, MA 02115
617/732-2902

## Colorado School of Mines

# *Sparking Student Interest in Humanities*

Undergraduates enroll in the Colorado School of Mines to earn Bachelor of Science degrees in fields such as geological, mineral, petroleum, or metallurgical engineering. These students have strong interests in technical and scientific fields, but often feel little natural attraction to the humanities, according to Karen Wiley, assistant professor of political science. In fact, Wiley says, "many of our students seemed to hate humanities, and didn't understand that the study of humanities as a discipline requires progressive levels of sophistication. They tended to sneer at humanities courses because they felt 'anybody can do humanities.'"

Students may have had that attitude because they rarely were exposed to anything but introductory-level humanities courses, Wiley explains. Now, however, the students' perceptions of humanities may be changing. In 1979, the Humanities and Social Sciences Department received a five-year grant from the National Endowment for the Humanities (NEH) to revise its undergraduate humanities curriculum. Wiley, director of the NEH project, believes the revised curriculum will kindle students' interest in the humanities by offering a freshman core course called Crossroads which encourages small group discussions, a required course in technical communication designed to improve students' oral and written communication skills, four tracks of sequential electives that go beyond the introductory level, and an honors program in public affairs.

**Crossroads**

In developing the new curriculum, faculty members emphasized the importance of active class participation. This emphasis appears in Crossroads, which deliberately avoids the use of lectures to a large number of students. Instead of passively listening, students read and dramatize plays, debate, hold mock court trials, conduct panel discussions, solve problems in small groups, and write critical and autobiographical essays. Each faculty member of the Humanities and Social Sciences Department teaches one section of Crossroads. This is possible because the department as a group designed the course. "We spent two years discussing and developing the anthology for the course, which we had printed by the college's printing office," says Wiley. "Naturally, these discussions greatly enhanced the sense of community within the department. When faculty members teach the same course, they end up discussing teaching methods and various problems more frequently." The course anthology allows some flexibility to faculty members, Wiley explains. One "tier" of reading selections is required in all sections, while

a second tier lists optional reading materials which faculty members can include if they wish.

Crossroads consists of three course units which each attempt to answer a thematic question. In the first unit, students read selections such as *Antigone*, the Declaration of Independence, and "Letter from Birmingham Jail" by Martin Luther King to discuss the question, "Are we ever justified in breaking the law?" Unit II asks, "Is freedom really possible?" and compares such concepts as Sartre's existentialism and Freud's determinism. Selections such as Indira Gandhi's "Human Environment" and Supreme Court cases such as Bakke versus University of California shed light on the question posed in the third unit, "Is it unjust to be treated unequally?" The use of thematic, interdisciplinary and value-laden questions in Crossroads helps freshmen "start off on the right foot" in their study of the humanities, says Wiley.

Another required freshman course, Technical Communication, helps students learn how to tailor written reports and oral presentations to the needs of different audiences. The students work on engineering case-studies which describe both the engineering problem and a selected "audience" to whom the solution of the problem must be presented. During the course, students learn to anticipate the questions a particular audience may ask, make oral presentations of technical problems, work on group projects, and write effective business letters.

**Elective Sequences**

After completing Technical Communication and Crossroads, sophomores choose a humanities elective sequence of which they must complete three courses. To keep students involved in some aspect of the humanities throughout their college years, the department requires students to take at least one elective each year. Students can choose to take course clusters in philosophy, literature, history, or social science. Each elective sequence offers three or four different courses on each level. For example, juniors enrolled in the philosophy sequence may take either Introduction to Symbolic Logic, Theory of Knowledge, or Philosophy of Religions: East and West. In addition to traditional humanities courses, the elective sequences also include some courses that combine aspects of engineering with the study of humanities. Courses such as Engineering in Western Civilization, History of Mining in Colorado, and Seminar in Engineering Ethics reflect the particular interests of engineering students. "Of course," says Wiley, "we also need courses that deal only with the humanities. Many of our faculty members believe that the humanities should open new vistas for our students. They hesitate, for instance, to try to relate Shakespeare to engineering." So far, the upper-level electives seem to appeal to undergraduates, says Wiley, although some students feel they should not be confined to one sequence. The department will address this issue next year, says Wiley.

As an alternative to the elective sequences, selected students may enroll in the Honors Program in Public Affairs for Engineers. This program accepts approximately 20 to 25 students who have completed Crossroads, who demonstrate a flair for writing, and who have an interest in management and leadership careers. Students in the Honors Program take five seminars: Western Cultural and Intellectual Heritage, The American Democratic Experience, The Modern Corporation and Society, Global Resources and their Role in International Politics, and Public Policies and the Politics of their Formulation. The seminars were designed by a team of professors from the faculties of humanities, engineering, and the social and physical sciences. Each seminar requires a major research paper which students present and defend orally in class. After completing the seminars, honor students work for nine to twelve weeks as interns for a corporation, government office, or public interest group. Finally, they participate in an honors workshop called Engineer and Social Planning, which uses case studies in technologies to examine the engineer's role in social and economic development. Workshop students also work as teaching assistants in lower level seminars.

The honors program, the elective sequences, Technical Communications, and Crossroads all aim to increase engineering students' appreciation of and skills in the humanities. "Students in professional schools are different from students in traditional liberal arts colleges," says Wiley. "But our students are disciplined and easy to get going in class discussions. In fact, they seem to crave the opportunity to express themselves." *K.M.*

For more information, contact:
Karen Wiley, Assistant Professor of Political Science
Director, NEH Project
Humanities and Social Sciences Department
Colorado School of Mines
Golden, CO 80401
303/279-0300

## University of Florida

## *Humanities Perspectives on the Professions*

In the early 1970s, the career-minded students at the University of Florida (UF), which boasts 19 colleges and schools on a single campus, viewed humanities courses as "hurdles to get over," says Gareth Schmeling, director of the Center for Studies in the Humanities. The majority of UF's 35,000 students, according to Schmeling, who is also a professor of classics, pursue undergraduate and graduate professional degrees. Says Schmeling: "All of these bright students were taking the minimum humanities requirement and nothing else. Humanities instructors never saw juniors or seniors."

In 1975 UF received a five-year National Endowment for the Humanities (NEH) grant to remedy this situation. The grant's purpose, according to Schmeling, was to "develop a nucleus of courses which explore the relations between a particular vocation and the general social context. We saw this as way of helping general humanities education thrive within the specialist orientation at UF."

Seven years later, humanities and professional school

instructors in the Humanities Perspectives on the Professions program have designed four core courses in health care, law, engineering, and business administration which provide humanities perspectives on these fields and a number of topics courses which explore a specific issue, such as mental health, from the context of one humanities discipline. "These courses," says Schmeling, "help students discover some of the essential relationships between the humanities, their vocationally-oriented courses, and the demands placed upon them in today's society as practicing professionals."

### Core Courses

Each of the core courses presents multidisciplinary discussions of the issues facing professionals in that field. They were designed by faculty members representing both the humanities disciplines and the appropriate professional school. UF offers the courses at the upper-division undergraduate level. Students fulfill their general education humanities requirement by completing three courses in the areas of history, literature, philosophy/religion, and interdisciplinary studies. Two of these courses must be in the categories of Ancient Times through the Renaissance and Renaissance to Modern Times. The third course can be chosen from a special topics category which includes the humanities and professions courses. In addition, students must enroll in Expository and Argumentative Writing and Writing about Literature.

Faculty members designed two humanities and health care core courses, one for students who are planning careers as doctors, the other for undergraduates studying in the nursing, pharmacy, or health-related professions programs. Each health care course examines the practitioner-patient relationship and explores "the significance of values, humanities constructs, and methods of inquiry as related to crises, problems, and decisions found in contemporary medical care." For example, in Humanistic Issues in Health Care: Medicine, students study and discuss the practice of medicine, perceptions of illness, culture and health, and research with human subjects. Says Schmeling: "The course provides religious, historical, ethical, and literary perspectives on medicine." Final papers provide opportunities for research and thought on such contemporary concerns as informed consent, the American Medical Association's role, and cancer research as a social and political issue. The Health Center admissions office chooses which students may enroll in this course based on students' acceptance or probable acceptance into a medical school. Advisers also select which students in the undergraduate professional programs of nursing and health-related professions may enroll in the health care core courses.

UF's engineering degree program is also an undergraduate professional program. Students in Humanistic Issues in Engineering examine society's relationship to technology. They read such writings as Kipling's "The Sons of Martha," Block's *Benjamin Franklin: His Wit, Wisdom, and Women*, and Schumacher's *Small is Beautiful*. Schmeling observes that engineering students are quite enthusiastic about the course; he believes this is directly related to the engineering instructors' interest and recommendations in the course.

Although pre-law students are difficult to identify, law school advisers attempt to select these undergraduates for admission to the humanities and law core course. According to Schmeling, College of Law advisers recommend this course to future law students, who are naturally curious to find out more about the law instructors. In Law, Value, and Method: An Introduction, students read *Waiting for Godot*, *The Merchant of Venice*, and *The Trial* in order to explore the law's relation to history, society, and human values.

Values are also a discussion topic in Humanities and Business Administration. Business advisers also select students for this course. Other topics include the work environment, individual responsibility, discrimination and affirmative action, and technology and the future. In the work environment section, for example, students read *Death of a Salesman* and consider employee and employer responsibilities.

### Special Topics Courses

Topics courses provide an in-depth examination of issues selected from the core courses. For example, while the future doctors may consider ethics in the core course, they can study various ethical theories, such as utilitarianism and deontology, in the philosophy course Ethical Issues in Medicine. This course also covers abortion, euthanasia, and suicide. Other medical topics courses are Philosophy and Mental Health. Comparative Health Systems, and American Medical History. "It is almost applied humanities," says Schmeling. "Students ask 'why read Plato?' We say 'Plato said this about medicine.'" Schmeling notes that medical school faculty members also offer components on rural health care, ethics, and the history of medicine to medical students.

Law school students can enroll in seminars on legal ethics, legal history, and the cross-cultural comparisons of law and the legal profession. Pre-law undergraduates explore The Courtroom as Theatre and Ethical Issues in Law. In the former course, students discuss *Hamlet*, *Inherit the Wind*, and *Judgment at Nuremberg*, visit courtrooms, study legal theories, and stage a mock trial. Says Schmeling, "Students learn that the skills of a literary critic, analyzing for deeper meaning, are the same skills of a lawyer. They take actual courtroom proceedings and begin to see the judge as the literary critic, the jury as the audience, and the witnesses as characters or heroes."

Engineering students may choose such special topics courses as History of Technology, Literature of Science, and The Fabulous Artificer. This latter course explores various images of engineers and scientists in *Paradise Lost*, *The Tempest*, and *Prometheus Bound*. "Engineers have to think of themselves as part of society," says Schmeling. "We have them read first-rate literature that has engineering as a subject." Options available to business students include Human Issues in Economic Thought and Selling as a Way of Life.

Schmeling believes that the core and special topics courses are successful in attracting the professional and pre-professional students to humanities. "They serve as 'sugar on the pill,'" he says. "We present a topic they're interested in and get them involved with humanities." Schmeling emphasizes that none of the courses are required. "They take the courses because they want to," he says. "Engineering students are not fulfilling require-

ments with these courses. We even added additional writing assignments to discourage some students. This is a realistic method for getting them interested in humanities."

The courses offer more than basic writing skills, according to Schmeling. "They learn critical judgment and analysis and have their intellectual curiosity awakened," he says. "They have a great deal of fun, too. Students see faculty members disagreeing and discover their instructors don't know everything. They see there is more to education than reading a textbook or taking an ethics course to become ethical."

Schmeling rates one of the program's successes as the opening up of communication between faculty members across the campus. "Many people in the professional schools and humanities no longer think of each other as 'them and us'" he says. "They realize all students belong to all faculty members."

In developing the program, Schmeling admits he had some disappointments. "You make friends and you lose friends," he says. "Some people say I sold out by creating humanities with a purpose. In fact the greatest resistance to the program has been among the humanities faculty." Due to this opposition, Schmeling says he worked on a one-to-one basis with instructors to introduce the program's concepts and match humanities and professional school faculty members for course development. Almost a year after the NEH grant ended, UF continues to maintain the existing courses and develop new special topics courses as faculty interests change.

"One of the greatest accomplishments of the program is that not everyone still thinks of engineers (or lawyers, doctors, and business persons) as the enemy," he says. As stated in the program's brochure: "Humanities are everyday tools, equipment for living. And for the professional, whose job it is to use modern society's complex and rapidly advancing technology to enhance the quality of life for people, an understanding of humanities is vital." *P.B.*

For more information, contact:
Gareth Schmeling, Director
Center for Studies in the Humanities
University of Florida
186 Grinter Hall
Gainesville, FL 32611
904/392-4997

## George Washington University

## *Ethics and Health Care Issues*

**With the development of courses in health care issues and bioethics, George Washington University (GW) instructors are attempting "to sensitize physicians and other allied professionals to the disciplines in the humanities which can illuminate and enhance their understanding of the context in which they practice," says Gail Povar, faculty associate for humanities and medicine in the Col**umbian College of Arts and Sciences Division of Experimental Programs. The division staff works with the School of Medicine and Allied Health Sciences faculty members to offer courses which draw on the resources of both the college and the medical school. As a faculty associate, Povar, who is also assistant professor of health care sciences and medicine, organizes the courses and serves as a resource person in bioethics and current health care concerns.

One of the courses Povar coordinates is Issues in Health Care, a required course for second-year medical students; physician assistant and nurse practitioner students also can enroll in this course. Faculty members from the medical school, the law school, and the departments of philosophy, religion, and health services administration lecture on such topics as health manpower, legal and economic aspects of health care, and the rights and responsibilities of practitioners and patients. "By exposing students to a wide range of ethical, legal, political, and economic issues, we help them develop a sense of the milieu in which they will practice," says Povar. "The course also gives them an opportunity to think analytically in the midst of a steady diet of medical courses heavy in memorization."

Seminar sessions, directed by a physician and a faculty member from outside the medical school, follow each lecture and allow students to discuss and critically examine the lecture topic in small groups. According to Povar, students benefit from being taught by a variety of professionals whom they would not meet in most academic situations. "Both seminar leaders serve as role models," she says. "Students see that it is alright for a physician to think about these issues, and they develop a new respect for professionals from other disciplines who are thinking seriously about the same topics."

Povar also arranges special workshops during the course which are scheduled at times convenient to the medical students but open to all class participants. During the fall 1981 semester, workshops focused on geriatrics and dying. The workshops feature panel discussions by experts in the field, followed by small seminar groups to encourage discussion and reflection on the topics. For example, in the workshop on death and dying, titled Decisions to Terminate Care, But Not Caring, the students explored the changing role of the physician in the dying process and the ethical dilemmas and concerns which arise. The course also includes an all-day symposium on alcohol and drug addictions which students rate as interesting and valuable. Participants view films which present the medical community's stereotypic view of the alcoholic and listen to panels which feature recovering alcoholics who are health professionals and Alcoholics Anonymous members who are related to physicians.

"This course allows students to step outside of themselves and view the medical profession from other disciplines," says Povar. "Students often feel angry about midway through the course. I attribute this anger and anxiety to their shock of discovering that medicine is not perceived as all good and all knowing. They learn that they cannot isolate themselves from other disciplines and viewpoints. They may not resolve these conflicts during the course, but in their clinical experiences they can flash back to these materials and react responsibly."

### Bioethical Issues

Medical students also can enroll in Current Issues in Bioethics, a course open to all GW students. Participation ranges from freshmen in a radiology technology program and seniors majoring in philosophy to medical students and doctoral candidates in psychology, says Povar; medical students account for 20 percent of the class. The purpose of the course, according to the spring 1982 syllabus, is to provide "the opportunity to work toward a coherent personal understanding of moral issues in general and in relation to such specific questions as euthanasia, informed consent, abortion, behavior control, and health care allocation." Faculty members representing the disciplines of law, religion, health services administration, social work, nursing, economics, philosophy, and medicine present lectures on these topics. One instructor well-versed in ethics and one instructor well-versed in clinical medicine serve as discussion leaders in the seminars which follow each lecture.

Toward the end of the semester students and faculty members do not gather for lectures but rather meet in small seminar groups to discuss such topics as informed consent in therapy and research, termination of aggressive therapy, paternalism and the professions, and meanings of health and disease. Each group chooses a topic and determines how to explore it. For example, during the four-week period a group led by Povar focused on genetic screening. During the first three weeks students conducted research and presented their findings on a variety of topics for class critique and discussion. An expert in genetic screening lectured on the topic at the fourth week's seminar.

"Students begin to develop a sophistication about ethical inquiry," says Povar. "We force them to exhibit good analytical and logical thinking within the framework of bioethics. They must evalute their own system of thought, belief, and logic and see where there is a tendency for snap judgments.

"For students whose appetite is whetted by either this course or by the thickets of clinical medicine, we have developed an intensive one-month seminar for senior-year medical students," says Povar. Her predecessor, Joanne Lynn, assistant clinical professor of health care sciences, initiated the Senior Elective in Biomedical Ethics, with funds from the National Endowment for the Humanities (NEH). GW faculty members, medical students, and students from other professional schools interact with their counterparts from Georgetown and Howard Universities and the Uniform Services Universities of the Health Sciences which help coordinate the course.

In describing the initial offering of the course in spring 1981, Lynn writes in an NEH report that "the faculty developed a program of instruction that was targeted to the concerns of medical professionals, rigorous in its treatment of these concerns within a framework of traditional ethical theory, and challenging and stimulating for both student and faculty. . . . The curriculum followed a logical progression from the basic tools of moral reasoning to their application in ethical issues beginning with the individual provider/patient relationship and increasing in scope and complexity to institutional and societal conflicts."

Students attend classes five days a week for four weeks, with each week's classes scheduled at a different school. During the first week instructors introduce the historical context of medical ethics and the basic principles of ethical argumentation. Reading assignments include the fourth century version of the Hippocratic Oath, Samuel Bard's 1769 "A Discourse upon the Duties of a Physician," and Anna Freud's "The Doctor-Patient Relationship."

The seminar continues with discussions focusing on the pressures of the physician/patient relationship from competing societal values and includes lectures on ethical and philosophical concerns in experimentation with human patients and social systems and schizophrenia. Other sessions examine genetic screening and counseling, care of the elderly, death and dying, and justice and health care allocations.

Povar notes that the course requires a large amount of reading and than there are more faculty members from the cooperating universities lecturing and leading discussions than there are students. According to Povar, both students and faculty members view the seminar as a satisfying experience and as an appropriate vehicle for learning and clarifying the ethical perspectives of medical concerns. "The students variously see this as an opportunity to rediscover their own values, to look outward, to move away from a self-centered educational process, or to develop a fuller commitment to service and society," says Povar.

Povar is pleased with GW's efforts in humanities and medicine. She points to a Society for Health and Human Values report which found that most medicial schools offer ethics "for an hour here and there." Says Povar: "Our students complete 30 to 40 hours in required nonclinical material in Issues in Health Care. In addition, offering bioethics as an elective is unusual." Povar also praises the Division of Experimental Programs which serves as a catalyst for these courses.

The geographic proximity of the medical school to the rest of the GW campus contributes to the expertise and creativity available for course development, says Povar. "This fortuitous proximity, which is a fairly uncommon phenomenon, permits a variety of students in the health professions to consider the impact of their professions and professional judgments from the vantage point of courses such as Current Issues in Bioethics and from the perspective of other students, whose attitudes and education differ significantly from their own. This exposure, we feel, facilitates the development in health professionals of respect for the relevance of the humanities—and those who study them—to their own activities."

The courses' benefits also extend to faculty members, according to Povar. "The courses form the nucleus for other activities," she says. "Faculty members enjoy doing something new and exciting. The courses are morale boosters and intellectual feeding grounds. They keep the faculty enthusiasm coming forth for students."

Povar anticipates more activities between humanities and medicine at GW. Ethics is already included in the school's lectures for residents, and Povar serves as a consultant for the undergraduate course Issues in American Medical Health Care. She would like to develop a symposium series on medicine and literature and, depending upon student interest, have the series evolve into a regular course. *P.B.*

For more information, contact:
Gail J. Povar, Faculty Associate for Humanities and Medicine
Department of Health Care Sciences
The George Washington University Medical Center
1229 25th St., NW
Washington, DC 20037
202/676-4090

## Worcester Polytechnic Institute

## *Qualifications in Liberal Learning*

In 1970, more than 100 years after its establishment, Worcester Polytechnic Institute (WPI) adopted a program which not only trains students in the factual world of science and technology but also develops their awareness and understanding of the implications of their work for society. WPI had followed the traditional engineering curriculum which relied heavily on required science and engineering courses and included a sampling of non-technical courses, according to Lance Schachterle, professor of English. The new program, called the WPI Plan, consists of four degree requirements, two each in the areas of liberal learning and professional preparation. Eighty-eight percent of WPI's students are majoring in engineering fields; six percent each are pursuing programs in management and science and mathematics.

For their professional requirements, students complete a Major Qualifying Project (MQP) and a competency examination. An MQP, according to the WPI catalog, is based in the student's major field of study and allows him or her to "demonstrate application of the skills, method, and knowledge of the discipline to the solution of a problem that would be representative of the type to be encountered in one's career." Similarly, WPI conducts competency examinations in the major field which require students to apply their knowledge to the solution of a professional problem.

WPI's liberal learning requirements are a Humanities Sufficiency and Interactive Qualifying Project (IQP). For the latter, students design studies which relate technology to society. In the sufficiency, they pursue a humanities theme through five courses which culminate in an independent study project. This project is usually a research essay, although it can be a creative effort such as a play or musical performance.

### Humanities Sufficiency

"The word *sufficiency* was chosen," says Schachterle, "to suggest a project which would offer contact with an area of humanities 'sufficient' to acquire an idea of how knowledge is obtained and expressed in a non-technical discipline." Students usually complete these projects by the end of their sophomore year. The undergraduates select themes from the disciplines offered by WPI's Humanities Department: architecture and art, drama/theatre, literature, foreign languages, history, history of science, music, philosophy, religion, and social ethics. The Humanities Department implemented the sufficiency requirement with National Endowment for the Humanities funds.

To prepare students for critical study in the humanities, WPI offers four introductory courses focusing on the arts and analysis in literature; history; and philosophy, religion, and ethics. Called concepts courses, they assist students in acquiring the necessary methodology and vocabulary in their interest areas. Schachterle notes that many students pursuing literary or historical themes do not enroll in concepts courses; he speculates that these students feel confident with their background in history and literature, while undergraduates interested in a philosophy sufficiency may never have taken a course on that topic.

In choosing their sufficiency coursework, students must ensure that all courses contribute to their final projects, says Schachterle. He emphasizes that courses need not be taken in a single discipline. For example, an electrical engineering student wrote on the theme of alienation in Nietzsche, Marx, van Gogh, and T.S. Eliot, after taking one course each in Romanticism, modern British literature, philosophy, modern art, and modern intellectual history.

The most popular humanities areas, according to Schachterle, are history, philosophy, and literature. Each discipline has a variety of courses to assist students in developing their themes. For example, American history topics include The Building of a Society: Colonial America as a Case Study, American Foreign Policy From the Civil War to World War II, American Labor History, American Science and Technology from 1859, and The Shaping of Post-1920 America. Undergraduates interested in Shakespeare can enroll in five courses focusing on the themes of various plays. Music courses cover fundamentals and examine music from the medieval, Renaissance, classical, romantic, and modern periods.

While most of the courses present traditional humanities and arts topics, some courses are slanted in the direction of science and technology. These include European Technological Development; Ethics in the Professions: Personal, Professional, and Social Dilemmas; and History of Science. In Science and Scientists in Modern Literature, for example, students read *Frankenstein*, *Zen and the Art of Motorcycle Maintenance*, and *Brave New World*.

After completion of a few humanities courses, students select an adviser to assist in the development of their themes. Recent projects include A Review of Dramatic Productions in the Worcester Area, Creationism in the Public Schools, and Women: Demons or Human Beings—Strindberg and Ibsen on Women. In the former project, a civil engineering student compared the lighting, costumes, set design, audience placement, and director's role in local productions of *Our Town*, *On Golden Pond*, and *Comedia Tonight*. For the creationism project, a management and engineering student discussed the theories of creationism and evolution and addressed the issues of constitutional rights and schools' obligations. In the Strindberg/Ibsen project, a management and engineering student looked at images of women in the playwrights' works, as well as the plays' historical context. As a creative project, an option taken by ten percent of the students, a mechanical engineering student per-

formed Handel's "Water Music" on an electronic synthesizer. Creative projects also must include a written analysis explaining how the work relates to the sufficiency theme. Says Schachterle: "These final projects explore new territory and draw on previous coursework."

While Schachterle admits that not all sufficiencies demonstrate above-average achievement, he notes that students are enthusiastic about the requirement. He attributes this to the demanding and rigorous courses. "These are very bright students," he says, "and we make no concessions for them. The topics are presented in a fashion comparable to that at liberal arts colleges. Our courses are not geared towards interests and abilities presumed to be different from those of the best liberal arts students." An additional explanation, he says, is the option to choose an area of great interest or "an area they dislike the least."

Schachterle lists research, writing, and organization as the practical skills gained from the sufficiency. All humanities courses emphasize writing, which makes them good preparation for the written requirements in the MQPs and IQPs. "Projects also give students the ability to conceptualize in areas where empirical data is not available and come to rational conclusions," says Schachterle. "They recognize that it is possible to argue different points of view." The Humanities Department also hopes students develop a lifelong appreciation of the humanities. "Sufficiencies provide an intellectual and emotional counterweight to a student's technical knowledge by allowing him or her to become an expert in one area," says Schachterle.

### Interactive Qualifying Project

IQPs help students broaden their awareness of the concerns surrounding scientific advancements by examining technology's relationship to society. According to the WPI catalog, IQPs make students "sensitive to general social problems; able to question, criticize or reinforce prevailing ethics and values concepts; aware of societal-humanistic-technological interactions; (and) able to analyze these interactions and make better judgments and policy recommendations on issues that affect society."

IQPs are completed in the junior year. Although no IQP coursework is required, students begin to consider topics as freshmen in order to develop the appropriate background. WPI divides IQPs into six divisions: energy, resources, and environment; planning for urban and rural environments; patterns in science, technology, and culture; issues in economic and social development; social problems and social services; and issues in education. Each division is divided into specialized topics and includes recommended courses.

For example, Patterns in Science, Technology, and Culture includes Technology and Human Life: Bioethics and Science, Technology, and Culture. IQPs in this latter area "examine the interaction of science and technology with the humanistic and non-qualitative aspects of culture." The catalog lists appropriate background as modern literature and fine arts and such courses as American History, Europe from the French Revolution to World War II, and American Science and Technology from 1859.

Recent IQPs include a civil engineering student's project which employed construction of the Worcester Civic Center as a case study for the examination of the social and ethical implications of civil engineering, and a computer science student's computer program which analyzed the assumptions of politicians during the Cold War by picking out key words and references in their speeches. Other IQPs focused on Soviet science fiction, Mark Twain and steamboat technology, and the English longbow.

WPI also has designed several special IQP programs. In the Time Machine-Living Museums Program, students work at New England museums. They catalog collections, prepare displays, and restore damaged artifacts. "These off-campus projects have great practical value because they force students to leave the sheltered academic world and accomplish something with people who may not share their interests or views," says Schachterle.

WPI administrators and faculty members are striving to graduate students who are technological humanists: "professionally competent in their technical fields and humanly aware of what needs to be done and why." Schachterle argues that the WPI Plan "produces the genuine liberal arts major of the 1980s, 1990s, and the next millennium." He says: "A traditional liberal arts education is constricting. WPI liberates learning by preparing students to deal with the technological environment. They can function in the decision-making areas of industry and management, have a sense of values, and are alert to what the humanities and arts stand for."*P.B.*

For more information, contact:
Lance Schachterle, Professor of English
Department of Humanities
Worcester Polytechnic Institute
Worcester, MA 01609
617/793-5441

## Additional Programs

### Adelphi University, Garden City, Long Island, NY 11530

*Folklore and Language* – Noting that the best method for understanding another culture is to live with a family in that culture, Lenora Greenbaum, associate professor of social work at Adelphi University, has developed a teaching strategy which she considers the next best approach. Greenbaum integrates the poetry, proverbs, folktales, and songs of various ethnic groups into two graduate-level School of Social Work courses. According to Greenbaum, folklore demonstrates the history and culture of ordinary people. "You learn what is important to people, what is a problem, and what is a culturally-approved solution," she says. "Folklore helps you understand the relationships between husband and wife and parent and child." Psychosocial Dynamics of the Black Family, required at the master's degree level, provides a historic perspective of the Black family structure and an understanding of the socialization process and the impact of social institutions on the Black family and features units on folktales, heroes, songs, language styles, and communication patterns to further explicate Black culture. Students in Culture of the Immigrant study the folklore and language of Vietnamese, Soviet Jews, Cubans, and Puerto Ricans. Greenbaum received a National Endowment for the Humanities grant to assist in integrating folklore into some sections of these courses during the 1981-82 academic year. The School of Social Work plans to include folklore in every facet of the curriculum, according to Greenbaum. "We will use folktales as a focus of learning," she says. "They provide a graphic demonstration of a culture which reaches students emotionally, not just intellectually. It is important for social workers to have a real feeling for the people they are working with and not to struggle to remember something they read in a textbook. Students remember folktales." Greenbaum has not received any negative responses to the new materials. Students tell her that folktales "offer clues into the uniqueness of a particular people" and provide an "insight into my clients and the best means of interacting with them." Greenbaum also has presented the identical course materials to approximately 20 faculty members who attended workshops during the 1981-82 academic year. Greenbaum states that the workshops also were quite popular. *P.B.*

Lenora Greenbaum, Associate Professor of Social Work, School of Social Work

### University of North Carolina at Charlotte, Charlotte, NC 28223

*Criminal Justice and the Humanities* – The Criminal Justice Department of The University of North Carolina at Charlotte offers two one-semester, team-taught courses called Criminal Justice and Literature and Justice and Philosophy which combine the study of humanities with the study of criminal justice. The dual focus of the courses encourages criminal justice students to view the humanities as a "legitimate" discipline and, in turn, exposes humanities students to basic principles of criminal justice, says J. David Hirschel, professor of criminal justice. Usually, an equal number of humanities and criminal justice students enroll in the courses, adds Hirschel. Students who enroll in Criminal Justice and Literature examine the development of criminal justice theories from the 18th century to the present, and the changes in criminal justice systems and society's view of crime during that same time period. In their study of criminal justice theories, students read Sue Titus Reid's textbook, *Crime and Criminology*, and short stories from Paul Dow's anthology, *Criminology in Literature*. The short stories provide illustrations, examples, and discussion topics that complement the readings in criminal justice theory, explains Hirschel. For example, he uses George Bernard Shaw's essay, "On the Entirely Reasonable Murder of a Police Constable" to suggest that the rational strictness and impartiality used by "classical school" theorists to make a punishment fit a crime could conceivably encourage extreme and lawless, but nevertheless rational, criminal responses. Other stories lead to discussion topics such as the criminality of suicide, conflict between family members, or the psychological theories of Freud, Adler, and Jung. Groups of approximately six students discuss the questions raised by the short stories. Each group then presents its conclusions to the whole class, while the instructors make comments and provide appropriate background information. During the second half of the course, students study criminal justice systems and read Henry Fielding's *Jonathan Wild*; Franz Kafka's *The Trial*; Shakespeare's "The Rape of Lucrece;" the schema of Dante's hell; and passages from Dicken's *American Notes*, Baudelaire's "The Flowers of Evil," and Kafka's notebooks. These materials help students study topics such as a medieval and Renaissance view of crime as sin, and an 18th century view of crime as a form of mercantilism. Students who wish to study the effect of different philosophical viewpoints on the processes of criminal justice may take Justice and Philosophy. This course uses M.P. Golding's *Philosophy of Law* and L.P. Katz's *The justice Imperative* to examine the role of philosophy in decisions about arrest, prosecution, bail, plea bargaining, trial, sentencing and punishment. Students write a ten-page paper in addition to participating in class discussions. Justice and Philosophy and Criminal Justice and Literature have received positive responses from students, says Hirschel. He believes the two courses address the problem of student "specialization" by encouraging criminal justice students to read works from different disciplines. *K.M.*

J. David Hirschel, Professor, Criminal Justice Department

### Sinclair Community College, Dayton, OH 45402

*International Environment: Culture and Business* – Students examine various aspects of international business in a new course developed by Sinclair Community College liberal arts and business faculty members. "International Environment: Culture and Business helps students develop an appreciation that the business, social, cultural, and political elements of life in foreign environments are different than those in our own country," says Robert Keener, coordinator of the course and assistant professor of business and technologies. The course was the inspiration of the Humanities Department which hosted a National Humanities Faculty Institute for local business and college representatives to explore international awareness from a humanities viewpoint. Recognizing that few business persons are sensitized to foreign culture, the Humanities Department worked with business faculty members to design a course which addressed these concerns. The course is available as either a humanities or management elective and is team-taught by instructors from the departments of business and technologies, geography, humanities, political science, and labor studies. Course topics include political systems, the effect of geography on trade, and the influence of religion. Students consider the ramifications of United State firms conducting business abroad by studying the facets of foreign life from the perspective of a company investigating overseas operations. Keener believes that both humanities and business students benefit from an awareness of the "variables that help determine the 'personality' of a given country." The majority of students enrolled in the course, offered for the first time in fall 1981, were business students taking it as a humanities elective. Keener believes that this and their enthusiasm for the course indicate their receptivity to humanities topics which relate to their careers. Seventy percent of the business students pursue such career programs as general management, marketing, and data processing, while 30 percent later complete baccalaureate degrees. The Business Division is considering an international business option which would require a foreign language elective and courses such as International Banking and World Geography in addition to the International Environment course. *P.B.*

Robert Keener, Assistant Professor of Business Technologies

### Southern Illinois University, Springfield, IL 62708

*Medical Education, Society, and the Humanities* – All Southern Illinois University School of Medicine students receive training in the social sciences, humanities, and behavioral sciences through a program

designed by the Department of Medical Humanities. The department currently offers special modules during the first and third year of the medical school program and is expanding to all four years of the program. In their first year, students attend humanities modules integrated with their locomotor, neuroscience, reproduction, and cardiovascular coursework. In the new program, second-year students will examine how clinical decisions are made through integrated modules in pathology, which explore the concepts of disease, and in pharmacology, which focus on the use and abuse of drugs. Third-year students enroll in special course sections, scheduled between their required clerkships, called Medical Education, Society, and the Humanities (MESH). According to a syllabus, the purpose of MESH is "to help students develop professionally within social, cultural, and political contexts." Students learn about the role of public health agencies, legislation affecting medicine, cultural and historical determinants of medicine, and ethical and professional standards. MESH includes units on what is normal in human growth and development, the physician-patient relationship, and the physician, crime, and the courts. The latter unit, for example, contains six modules on such topics as the judicial process, the physician as expert witness, and jury dynamics. In addition, the department also integrates special modules into the third-year clerkships at the appropriate time, according to Glen Davidson, chairperson. Thus, students with patient responsibilities will attend MESH modules on abortion and ethical concerns and the history and content of Illinois abortion laws during their obstetrics/gynecology clerkship. Fourth-year medical students choose two MESH units from a list which includes religious factors in illness, literature and medicine, rural medical practice, and health policy issues of group practice. The MESH program, according to Davidson, has three objectives: to correct the lopsided emphasis in medical education on the sciences which occurred during World War II when there was a great need for quickly-trained physicians, to overcome the remedial needs of the premedical student who sacrifices humanities coursework for a science background, and to bring the insights of humanities to the decision-making process. *P.B.*
Glen W. Davidson, Chairperson, Department of Medical Humanities

## Villanova University, Villanova, PA 19085

*Engineering: The Humanistic Context* – With funds from AAC's Project QUILL, Villanova University faculty members designed a humanities course for engineering students which offers "a greater sense of how engineering is connected to societal concerns," says John Fielder, associate professor of history. Titled Engineering: The Humanistic Context, the course is team-taught by Fielder and faculty members from the English and business administration departments and explores the historical, social, political, and economic context in which a Gothic cathedral, the Brooklyn Bridge, and the Bay Area Rapid Transit (BART) System in San Francisco were designed and built. Each case study includes a technical presentation by a guest lecturer, as well as the humanistic characteristics of each project. For example, in the Brooklyn Bridge study, students learn about bridging techniques and construction principles, the designer's personality as compared and contrasted to that of his contemporaries and today's engineers, and the political, civic, and economic climate created by Boss Tweed and Tammany Hall. A field trip to the Brooklyn Bridge, with commentary by the person in charge of New York City's 1,300 bridges, highlights this unit, according to Fielder. He see this course as a valuable method for introducing engineering students to the liberal arts. "By beginning with what is interesting and attractive to them we break down their prejudices against liberal arts," says Fielder. Robert Lynch, dean of the College of Engineering, summarizes the course objectives as providing insights on the societal impact of engineering projects, demonstrating how humanities and social science information can be useful in engineering planning and design, assisting engineering students in the selection of humanities and social science electives by providing a background in these disciplines, and graduating engineers "who are better prepared to deal with the increasingly complex technological problems of our society." Fielder hopes the course, offered for the first time in spring 1982, will serve as a centerpiece for additional courses which could focus on technology and such disciplines as philosophy, religious studies, and economics. He notes that support from the deans of both the College of Engineering and the School of Liberal Arts and Sciences has been important for the course, which is well received by its current participants. *P.B.*
John Fielder, Associate Professor of Philosophy

## West Virginia University, Morgantown, WV 26506

*Literature and Nature* – Undergraduates earning forestry degrees at West Virginia University (WVU) can enroll in a literature course which focuses on poems, short stories, and novels about the natural environment. John Stasny, professor of English and course co-designer, notes that the students often choose a forestry career because they like to fish and hunt and be outdoors. "They are surprised to discover that their interests are not those of their professors," says Stasny, "and they are quickly converted to a utilitarian attitude towards forestry. This course reestablishes, on a more sophisticated level, the love of nature that brought them into the program." Stasny and David White, professor of forest economics and policy, designed the course after deciding that the typical literature course, used to fulfill general education requirements, was often an unsatisfying experience for professional students. Their course employs a variety of learning activities and includes works by Emerson, Wordsworth, Sherwood Anderson, Faulkner, and Conrad. They divide the coursework into sections titled ecological attitudes, failures, and where did we go wrong? In the attitudes section, for example, students study Buddhist, Christian, classical, and romantic views of nature and read Steinbeck's *The Red Pony*, the Hindu Bhagavad-Gita, and Hawthorne's "Young Goodman Brown." Students keep a journal of their responses to the readings and class meetings. Other activities include student debates and panels, guest lectures, and films. For the panels, students conduct library research and present formal statements of their views. "These discussions give the usually laconic forestry student experience in oral presentations similar to those they may experience in their careers," says Stasny. The course's most successful feature, he says, is a dramatic reading of Vonnegut's *God Bless You, Mr. Rosewater*. Stasny and White believe the course fosters students' tolerance and understanding of different viewpoints and discovery that literature is relevant to their professional interests. They say that some students feel uncomfortable with classroom debates, especially those between the instructors, and remain inarticulate about literature. Although designed for forestry students, the course attracts liberal arts students who provide an important dimension and orientation, says Stasny. He considers the course a success and anticipates it will be offered again in the future. Noting the difficulties in getting course materials, Stasny is eagerly awaiting the arrival of a new anthology on nature. *P.B.*
John Stasny, Professor of English
David E. White, Professor of Forest Economics and Policy

## Resources

Association of American Colleges. *A Dialogue on Liberal Learning in Professional Education held at Worcester Polytechnic Institute, Worcester, Massachusetts.* Washington, DC: AAC, 1976.

This pamphlet summarizes one of five invitational dialogues on aspects of liberal learning sponsored by AAC in 1976. It includes case studies of liberal arts programs at Worcester Polytechnic Institute, Tufts University, and Babson College. Available from AAC for 25 cents (prepaid).

Association of American Medical Colleges. *An Overview of the General Professional Education of the Physician and College Preparation for Medicine and Questions That Should Be Asked.* Washington, DC: AAMC, 1982.

With funds from the Henry J. Kaiser Family Foundation, AAMC is undertaking a three-year study of the general education of the physician, defined as the eight years of college preparation and medical school. This report summarizes the current status of clinical education, biomedical science education, and college preparation, and asks appropriate administrators to respond to a series of questions as part of the study. Persons interested in learning more specific information about the medical school curriculum should consult the *1981-82 AAMC Curriculum Directory*, which lists the required coursework for each United States and Canadian medical school. The directory can serve as a resource for identifying, for example, which schools have coursework in humanities and ethics and values.

Beck, Robert E. *Career Patterns: The Liberal Arts Major in Bell System Management.* Washington, DC: Association of American Colleges, 1981.

Beck reports on two American Telephone and Telegraph Company studies which compare how management employes with different college majors fare in managerial potential and progress. The studies show, for example, that in interpersonal skills, humanities/social science majors were ahead of engineers and mathematics/science majors. Available from AAC for $1.00 (prepaid).

Bock, Robert H., ed. *Modern Values in Business and Management. Proceedings from the 1979 AACSB Annual Meeting.* St. Louis: American Assembly of Collegiate Schools of Business, 1979.

The papers presented at AACSB's annual meeting explore the theme of corporate social responsibility. James L. Hayes, president of the American Management Associations, stresses that the challenge of teaching ethics is to prepare students to make value judgments not only about the case studies presented in class but in real-life decision-making situations. He cautions that business schools should not substitute "instant ethics" courses for the more rigorous approach often found in a liberal arts course which provides a background in the ethical, social, and political development of nations or an examination of right and wrong as portrayed in Shakespeare's plays. Clarence C. Walton, Columbia University professor, discusses the importance of values and ethics in the business curriculum and notes, "Liberal learning has always incorporated a moral and ethical content. As heirs to that liberal tradition professional schools, including business, have precedents to inspire and challenges to meet." Other presentations include Bock's introduction to corporate social responsibility and William Agee's examination of the principles and goals of effective business leaders. Copies of the proceedings are available from AACSB, 11500 Olive Street Rd., St. Louis, MO 63141 for $2.50 ($1.50 postage and handling).

Fedo, David A. "Learning for Careers and Life: Liberal Arts in the Professional Institutions." *The College Board Review*, Fall 1977, p. 29.

Fedo argues that some professional schools are doing a better job in providing a liberal education than are liberal arts colleges. He notes that these schools require exposure to the humanities and liberal arts, in addition to professional training, and produce what Alfred North Whitehead described as "(students) who possess both culture and expert knowledge in some special direction." Fedo describes programs at Worcester Polytechnic Institute, Massachusetts College of Pharmacy, and Bentley College. Says Fedo, "Strange as it may seem, some of the most interesting teaching and more than a share of the innovative educational programs in the humanities and social sciences are found these days in the technical and professional colleges – institutions that are, for a variety of reasons, no longer content to burden society with uninformed technocrats."

Koehnline, William A. "The Marriage of the Humanities and the Trades." *New Directions for Community Colleges: Occupational Education Today*, no. 33. San Francisco: Jossey-Bass Inc., Publishers, 1981.

Koehnline believes humanities are appropriate and necessary components of occupational education. He describes three approaches for including humanities in occupational programs: traditional courses, modules, and in-service, mid-career, and pre-retirement courses. Modules, for example, may be short courses on the humanities, several short courses combined into a large course package, or guest lectures on humanities topics in vocational courses.

Lieb, Irwin C. "Professional Education: Who's in Charge." *The Chronicle of Higher Education*, July 7, 1980: 48.

This article makes a distinction between "training" and "education." The author claims that professional training becomes "dominated by the profession's past practices" unless students also study arts and sciences disciplines. Consequently, the author calls for an administrative separation of professional schools and the universities which house them. He also recommends that professional schools be graduate programs rather than undergraduate programs, and that they offer professional rather than academic degrees.

Mayhew, Louis B. and Ford, Patrick J. *Reform in Graduate and Professional Education.* San Francisco: Jossey-Bass Publishers, Inc., 1974.

Mayhew and Ford devote the first third of this volume to a review of professional education and the similarities and problems of education in the various professions. They note, for example, the difficulties in determining the appropriate balance between the liberal arts and sciences, professional sciences, and application. The authors describe such current reforms as inclusion of humanities, interdisciplinary courses, international perspectives, and ethics discussions.

Nichols, Alan B. "Humanities and Medical Education: A Shaky Partnership." *Humanities Report*, August 1981, pp. 14-17.

Nichols reports on a number of medical schools which are recognizing the value of humanities and liberal arts in their students' training. Brief reports on George Washington University, Georgetown University, Hershey Medical Center at Pennsylvania State University, and Southern Illinois University are included. Nichols notes that the American Medical Association believes that humanities is the business of the undergraduate college rather than the medical school and that the future of the humanities and medicine connections will be determined only after "practitioners decide whether medicine is essentially a humanistic discipline with a scientific component or a scientific discipline with a humanistic component."

Nyre, Glenn F. and Reilly, Kathryn C. *Professional Education in the Eighties: Challenges and Responses.* AAHE/ERIC Higher Education Research Report, no. 8. Washington, DC: American Association for Higher Education.

The authors define professional education as "an intensive education program composed of training both in theory and practice of a distinct, specialized body of knowledge." They review developments in professional education, including admissions, curricular developments, and continuing education. Recommendations, based on their findings, include the refinement of admissions standards to determine the applicants' interpersonal skills which are essential to service delivery, the integration of professional theory and practice in the undergraduate curricula, and the introduction of professional development strategies.

Poe, William. "Engineers Move Haltingly to Integrate Humanities and Technical Training." *Humanities Report*, January 1980.

This article describes a shift in the perceived role of engineers from "facilitators" to "determiners" of social change. The author believes that this shift necessitates an increased emphasis on the humanities in traditional engineering curricula. He presents several examples of programs that are responding to this need. These include programs at the University of Colorado, University of Missouri at Rolla, Lehigh University, and Princeton University.

White, David E. "Minds in a Groove." *The Chronicle of Higher Education*, May 22, 1978, p. 40.

White believes that universities are not adequately educating students in both professional competencies *and* the humanities. He chides both humanists and professional school educators for their lack of understanding of each other's strengths and encourages administrators and faculty members to devise an undergraduate program which provides competence in "improving the human condition."

**Association of American Colleges**
1818 R Street, N.W.
Washington, D.C. 20009
202/387-3760

aac

*The Forum for Liberal Education* is a topic-oriented publication featuring a subject of importance for liberal education in each issue. It does not endorse or evaluate institutional activity. Rather, it describes various ways in which institutions of higher learning address important common concerns. Upcoming issues of the *Forum* will look at AAC's Minority Achievement Program, science literacy, and general education. **The *Forum* staff is interested in receiving program information from our readers.** If your school is chosen for inclusion in an issue a staff member will interview a contact person at your school and write the article.

*The Forum for Liberal Education* is published six times during the academic year by the Association of American Colleges. The *Forum* is available at a subscription rate of $16 per academic year for persons at AAC member institutions, and $22 for all others. Rates for back issues are available upon request. Please address all correspondence, inquiries, and subscription orders to *Forum* at the Association of American Colleges.